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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,455	02/07/2002	Ikuo Kawamoto	020587	1845

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT PAPER NUMBER

2871

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/072,455	KAWAMOTO ET AL.	
	Examiner	Art Unit	
	Tarifur R Chowdhury	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the claims

1. Currently claims 1-25 are pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 8, 11-14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Cobb, Jr. et al., (Cobb), USPAT 5,825,542.**

3. Cobb discloses and shows in Fig. 1a, a polarizing element (13) comprising a reflective polarizing plate (8) for separating incident natural light into reflected light and transmitted light both of which are composed of polarized light, and a light-diffusion pressure-sensitive adhesive layer (6) provided to the reflective polarizing plate (8) (col. 2, lines 17-24, 56-60; col. 13, lines 27-30).

Cobb also discloses that the polarizing element can be used in a liquid crystal display (col. 2, lines 13-14).

Accordingly, claims 1 and 12 are anticipated.

As to claim 13, since the method of manufacturing the polarizing element is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

As to claims 8 and 16, Cobb also discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles (col. 3, lines 14-34).

As to claims 11 and 14, Cobb clearly shows in Fig. 1a that the light-diffusion pressure-sensitive adhesive layer (6) is provided adjacent to the reflective polarizing plate (8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-8, 11-16 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama et al., (Kameyama), USPAT 5,999,243 (provided by the applicant) in view of Cobb.**

6. Kameyama discloses and shows in Fig. 6, a liquid crystal display including a polarizing element wherein the polarizing element comprising a circularly polarized light separator (1) and quarter wave plate (3) (either only the circularly polarized –light separator or the combination of the light-separator and the quarter wave plate being applicant's reflective polarizing plate) for separating incident light into reflected light and transmitted light both of which are composed of polarized light (col. 5, line 59 – col. 6, line 7; col. 12, line 6-56). Kameyama also discloses the use of pressure-sensitive adhesive to laminate multiple layers (col. 13, lines 28-47).

Kameyama differs from the instant invention because he does not explicitly disclose that the pressure-sensitive adhesive layer has diffusive properties.

4. Cobb discloses and shows in Fig. 1a, polarizing element including a reflecting polarizing plate (8) and a light-diffusion pressure-sensitive adhesive layer (6) (col. 2, lines 17-24, 56-60; col. 13, lines 27-30). Cobb also discloses that a polarizing element having a light-diffusion pressure-sensitive adhesive layer is advantageous since it provides higher reflectivity and better performance and thus able to contribute to enhanced display efficiency, brightness and contrast (col. 1, lines 44-47).

Cobb is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a polarizing element that includes a light-diffusion pressure-sensitive adhesive layer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display of Kameyama by providing a light-diffusion pressure-sensitive adhesive on the reflecting polarizing plate so that enhanced

display efficiency, brightness and contrast is obtained, as per the teachings of Cobb.

Further, the method of manufacturing the polarizing element would have been obvious in view of the device.

Accordingly, claims 1, 2, 6, 7, 11-15, 20 and 25 would have been obvious.

As to claims 3, 4, 21 and 22, Kameyama discloses that the circularly polarized light separation plate (1) comprises a cholesteric liquid crystal polymer, which has undergone Grandjean orientation (col. 5, lines 59-61).

As to claims 5 and 23, Kameyama also discloses that the cholesteric liquid crystal layer can be a superimposed structure of cholesteric liquid crystal layers different from each other in a helical pitch of Grandjean orientation (col. 7, line 65- col. 8, line 3).

As to claims 8 and 16, Cobb also discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles (col. 3, lines 14-34).

As to claims 19 and 24, Kameyama discloses that the polarizer of the invention is not limited to circularly-polarized light separator but also linearly-polarized light separator (col. 5, lines 51-55).

7. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama and Cobb as applied to claims 1-8, 11-16 and 19-25 above and further in view of Mikura et al., (Mikura), USPAT 5,880,800.

8. Kameyama in view of Trapani discloses that the pressure-sensitive adhesive is made of a polymer but do not explicitly disclose the polymer is an acrylic polymer having a weight average molecular weight of at least 100,000.

Mikura discloses optical film having pressure sensitive adhesive layers wherein the pressure-sensitive adhesive layers are made of polymers wherein the polymer is an acrylic polymer having a weight average molecular weight of at least 300,000 (col. 1, line 5; col. 5, line 55 – col. 6, line 2). Mikura also discloses that such an optical film is excellent in heat resistance and moisture resistance (col. 1, lines 6-7).

Mikura is evidence that ordinary workers in the art would find a reason, suggestion or motivation to form pressure-sensitive adhesive layers using acrylic polymer having a weight average molecular weight of at least 300,000.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the pressure-sensitive adhesive layer of Kameyama when modified by Cobb such by using an acrylic polymer having a weight average molecular weight of at least 300,000 so that an optical film with excellent heat resistance and moisture resistance is obtained, as per the teachings of Mikura.

Accordingly, claims 9 and 17 would have been obvious.

9. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kameyama in view of Cobb as applied to claims 1-8, 11-16 and 19-25 above and further in view of Goetz et al., (Goetz), USPAT 6,288,172.

10. Kameyama in view of Cobb discloses that the light-diffusion pressure-sensitive adhesive layer is made of a polymer containing uncolored transparent particles but does not explicitly disclose that the particles have an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Goetz discloses light diffusing adhesive that is made of organic polymer

particles having an average diameter of about 0.5 μm to about 30 μm (overlaps the claimed range) (col. 12, lines 11-15). Goetz also discloses that such a light diffusion adhesive provides excellent light diffusion properties with low back scattering (col. 1, lines 12-14).

Goetz is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use light diffusion adhesive that has particles with an average particle diameter ranging from 0.5 μm to 20 μm are selected from inorganic particles and organic particles.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the light diffusion adhesive of Kameyama when modified by Cobb by using organic particles having an average particle diameter ranging from 0.5 μm to 30 μm so that a light diffusion adhesive with excellent light diffusion properties with low back scattering is obtained, as per the teachings of Goetz.

Response to Amendment

10. The declaration filed on 10/10/03 under 37 CFR 1.131 is sufficient to overcome the US 2003//0002154 reference.

Conclusion

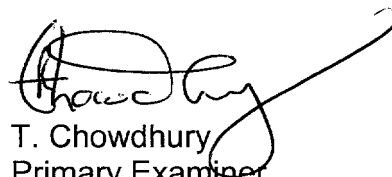
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

Art Unit: 2871

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury
Primary Examiner
Technology Center 2800

TRC
December 1, 2003